

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-06	Waterbody Survey ID: sasa004p
State: WI	County/Parish: Ashland	USGS Waterbody Name: UNT to Gehrman Creek	
Company: Enbridge	Crew Member Initials: NTT/DGL	Latitude: 46.365579	Longitude: -90.588129
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The waterbody is a perennial stream that meanders through a hardwood swamp community (wasa031f).			
Measurements			
Depth of Water: <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>6</u> ft. <input type="checkbox"/> N/A	
OHWM Width: <u>8</u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Carex lasiocarpa, Equisetum arvense, Fraxinus pennsylvanica, Oryzopsis asperifolia.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Flowing water present with riffles and pools providing habitat for frogs, fish species, aquatic invertebrates.			
Aquatic Organisms Observed (list): Aquatic invertebrates, frogs.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): ATV trail is present along waterbody bank.			
Observation Notes: Sandbars and gravel beds present. Fallen trees and debris in stream.			



sasa004p_E (across)



sasa004p_N (upstream)



sasa004p_S (downstream)

Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed swale		Waterbody ID: sasw004
State: WI		County: Ashland	Company: WEST	Crew Member Initials: ES/PS
Tract Number(s): WI-AS-255.000		Nearest Milepost 35.0		Associated Wetland ID(s): wasw012f
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other: becomes cobble swale at wasw012f outlet				
OHWM Width: <u>4</u> ft. Height: <u>8</u> in. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: <u>4</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: (Approx.) N/A <input checked="" type="checkbox"/> _____ ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>6</u> in. Left: <u>6</u> in.	Bank slope Right: <u>35</u> degrees Left: <u>35</u> degrees	
Qualitative Attributes				
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____ % _____ % <u>75</u> % _____ % _____ % _____ % <u>25</u> % _____ %				
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) <u>12</u> in. <u>3</u> in. _____ in.			
Dominant Bank Vegetation (list): <i>Acer saccharum, Fraxinus spp, Osmunda claytonia</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none				
Aquatic Organisms Observed (list): none				
T&E Species Observed (list): none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

sasw004

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

sasw004 contiguous with sasw012 in WI-AS-252.000

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

sasw004



sasw004



Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-11	Waterbody Survey ID: sasa017e
State: WI	County/Parish: Ashland	USGS Waterbody Name: UNT to Marengo River	
Company: Enbridge	Crew Member Initials: NTT/DGL	Latitude: 46.432002	Longitude: -90.888406
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Man-made ditch located along a large berm. Many trees and shrubs are growing throughout the ditch.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 4 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Populus tremuloides, Fraxinus pennsylvanica, Salix petiolaris, Carex intumescens, Abies balsamea.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Large man-made berm. Abundant fallen trees and debris.			
Observation Notes: No water present at time of survey.			



sasa017e_E (downstream)



sasa017e_S (across)



sasa017c_W (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-11	Waterbody Survey ID: sasa018e
State: WI	County/Parish: Ashland	USGS Waterbody Name: UNT to Marengo River	
Company: Enbridge	Crew Member Initials: MAL/NTT/DGL	Latitude: 46.432047	Longitude: -90.888502
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Artificial ditch feature within forested depression that likely contains water only after rain events.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 4 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Banks dominated by Populus tremuloides and Fraxinus nigra.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Erosion.			
Observation Notes: Channel covered by leaves and other decaying material. No water present at time of survey.			



sasa018e_E (downstream)



sasa018e_N (across)



sasa018c_W (upstream)

Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed, roadside forested swale		Waterbody ID: sasw010
State: WI		County: Ashland	Company: WEST	Crew Member Initials: ES/AS
Tract Number(s): WI-AS-245.000		Nearest Milepost 33.9		Associated Wetland ID(s): none
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other: erosional swale				
OHWM Width: _____ ft. Height: _____ ft. N/A <input checked="" type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: _____ ft. 3 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _____ ft. 3 ft.	Width of Waterbody - Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	Depth of Water: (Approx.) _____ ft. N/A <input checked="" type="checkbox"/>	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: _____ ft. Left: _____ ft. 0.5 ft. 0.5 ft.	Bank slope Right: _____ degrees Left: _____ degrees 45 degrees 45 degrees	
Qualitative Attributes				
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____ % _____ % 15 % _____ % _____ % _____ % _____ %				
Width of Riparian Zone: _____ ft. N/A <input type="checkbox"/>	Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ in. <input type="checkbox"/> Saplings/Shrubs: _____ in. <input type="checkbox"/> Herbs _____ in. Avg. DBH of Dominants: (approx.) _____ in. _____ in. _____ in.			
Dominant Bank Vegetation (list): Acer saccharum, Tilia americana, Carex pedunculata				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): None				
Aquatic Organisms Observed (list): none				
T&E Species Observed (list): none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Located adjacent to two track dirt/gravel access rd				
Waterbody is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated				
Stream Quality ^a : (check one) <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

sasw010

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Feature is roadside drainage swale. Does not appear contiguous with other swales or streams in area. provides little habitat and hydrological function. No water, flow, or defined OHWM present.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

sasw010



Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Gerhman Creek		Waterbody ID: sasw008	Date: 9/24/2019
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES/AS	Photos: 7514, 7520, 7521	
Tract Number(s): WI-AS-245.000 and WI-AS-247.000		Nearest Milepost 33.9, 34		Associated Wetland ID(s): wasw014e	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other: swale features					
OHWM Width: _____ ft. Height: _____ ft. N/A <input checked="" type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: _____ ft. 4 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: _____ ft. 5 ft.		Width of Waterbody - Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
Depth of Water: (Approx.) _____ ft. N/A <input checked="" type="checkbox"/>					
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) _____ fps N/A <input checked="" type="checkbox"/>		Bank height Right: _____ ft. Left: _____ ft. 0.5 ft. 0.5 ft.	
Bank slope Right: _____ degrees Left: _____ degrees 45 degrees 60 degrees					
Qualitative Attributes					
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____ % _____ % 25 % _____ % _____ % 50 % 25 % _____ %					
Width of Riparian Zone: _____ ft. N/A <input checked="" type="checkbox"/>		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) 10 in. 2 in. _____ in.			
Dominant Bank Vegetation (list): Acer saccharum, Tilia americana, Ulmus americana, Carex pedunculata, Dryopteris intermedia					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none					
Aquatic Organisms Observed (list): none					
T&E Species Observed (list): none					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Flows under two track dirt/gravel road through plastic culverts.					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality ^a : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:

sasw008

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

No flow, little aquatic habitat, little herbaceous layer

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



sasw008



Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed roadside ditch/erosional swale		Waterbody ID: sasw009
State: WI		County: Ashland	Company: WEST	Crew Member Initials: ES,AS
Tract Number(s): WI-AS-245.000		Nearest Milepost 34		Associated Wetland ID(s): wasw014e
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other: erosional swale feature				
OHWM Width: _____ ft. Height: _____ ft. N/A <input checked="" type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: _____ ft. 4 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _____ ft. 4 ft.	Width of Waterbody - Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	Depth of Water: (Approx.) _____ ft. N/A <input checked="" type="checkbox"/>	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: _____ ft. Left: _____ ft. 1 ft. 1 ft.	Bank slope Right: _____ degrees Left: _____ degrees 90 degrees 90 degrees	
Qualitative Attributes				
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____ % _____ % _____ % 20 % _____ % 35 % 45 % _____ %				
Width of Riparian Zone: _____ ft. N/A <input checked="" type="checkbox"/>	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) 10 in. 2 in. _____ in.			
Dominant Bank Vegetation (list): Acer saccharum, Tilia americana, Scirpus cyperinus				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none				
Aquatic Organisms Observed (list): none				
T&E Species Observed (list): none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Erosion, off road vehicle use, soil compaction				
Waterbody is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated				
Stream Quality ^a : (check one) <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

wasw009

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Feature is roadside ditch/erosional swale within two track access rd. No water, flow, or defined OHWM present

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

sasw009



APPENDIX F

Waterbody Data Sheets

Part 20 of 24

Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed erosional swale		Waterbody ID: sasw007	Date: 9/24/2019
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES/AS	Photos: 7503,7506, 7507	
Tract Number(s): WI-AS-245.000		Nearest Milepost 34		Associated Wetland ID(s): wasw014e	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other: erosional road feature from washout					
OHWM Width: _____ ft. Height: _____ ft. N/A <input checked="" type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: _____ ft.		Width of Waterbody - Toe of Slope to Toe of Slope: _____ ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> _____ ft.	
Depth of Water: (Approx.) N/A <input type="checkbox"/> _____ ft.					
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) _____ fps N/A <input checked="" type="checkbox"/>		Bank height Right: <u>2</u> ft. Left: <u>2</u> ft.	
Bank slope Right: <u>90</u> degrees Left: <u>90</u> degrees					
Qualitative Attributes					
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% <u>10</u> % <u>15</u> % _____% <u>85</u> % _____% _____%					
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____ in. <input type="checkbox"/> Saplings/Shrubs: _____ in. <input type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) _____ in. _____ in. _____ in.			
Dominant Bank Vegetation (list): <i>Acer saccharum, Ulmus americana</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none					
Aquatic Organisms Observed (list): none					
T&E Species Observed (list): none					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Erosion, washout, soil compaction, off road vehicle use					
Waterbody is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated					
Stream Quality ^a : (check one) <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low					

Waterbody ID:

wasw007

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Feature is an erosional swale as a result of a washed out two-track access rd.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

sasw007



sasw007



Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed stream		Waterbody ID: sasw012	Date: 9/30/19
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES AS	Photos: 7705, 7716, 7720	
Tract Number(s): WI-AS-252.000, WI-AS-252.001		Nearest Milepost: 34.9	Associated Wetland ID(s): wasw027f, wasw012f		
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input checked="" type="checkbox"/> Other: swale s side, stream north of rd					
OHWM Width: <u>2</u> ft. Height: <u>2</u> in N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>4</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>2</u> ft.	Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>3</u> in ft.		
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <u>0.1</u> fps N/A <input type="checkbox"/>	Bank height Right: <u>4</u> in ft. Left: <u>4</u> in ft.	Bank slope Right: <u>30</u> degrees Left: <u>30</u> degrees		
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% <u>10</u> % _____% _____% <u>60</u> % <u>30</u> % _____%					
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input type="checkbox"/> Saplings/Shrubs: <input type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) <u>12</u> in. <u>3</u> in. <u>0.5</u> in.				
Dominant Bank Vegetation (list): <i>Carex scapata, Acer saccharum, Fraxinus spp, Betula alleghaniensis</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs present, riffles, woody debris in stream					
T&E Species Observed (list):					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Two track dirt access road, stream flows through twin culverts under the road. only one pipe has flowing water, other blocked by sediment. Roadside ditches flow to stream on the south s of the access rd. Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality ^a : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:

sasw012

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream contiguous with sasw004 north of parcel in WI-AS-255.000

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



sasw012



Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed swale		Waterbody ID: sasw004
State: WI		County: Ashland	Company: WEST	Crew Member Initials: ES/PS
Tract Number(s): WI-AS-255.000		Nearest Milepost 35.0		Associated Wetland ID(s): wasw012f
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other: becomes cobble swale at wasw012f outlet				
OHWM Width: <u>4</u> ft. Height: <u>8</u> in. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: <u>4</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/>	Depth of Water: (Approx.) <u> </u> ft. N/A <input checked="" type="checkbox"/>	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <u> </u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>6</u> in. Left: <u>6</u> in.	Bank slope Right: <u>35</u> degrees Left: <u>35</u> degrees	
Qualitative Attributes				
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u> </u> % <u> </u> % <u>75</u> % <u> </u> % <u> </u> % <u> </u> % <u>25</u> % <u> </u> %				
Width of Riparian Zone: <u> </u> ft. N/A <input checked="" type="checkbox"/>	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <u>12</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>3</u> in. <input checked="" type="checkbox"/> Herbs: <u> </u> in. Avg. DBH of Dominants: (approx.)			
Dominant Bank Vegetation (list): <i>Acer saccharum, Fraxinus spp, Osmunda claytonia</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none				
Aquatic Organisms Observed (list): none				
T&E Species Observed (list): none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

sasw004

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

sasw004 contiguous with sasw012 in WI-AS-252.000

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

sasw004



sasw004



Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Camp Four Creek		Waterbody ID: sasw005	Date: 9/21/2019
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES/PS	Photos: 20190921_110203-11858, 7464	
Tract Number(s): WI-AS-255.000		Nearest Milepost 35.05		Associated Wetland ID(s): wasw013ss	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>6</u> ft. Height: <u>10</u> in. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>12</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>12</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>6</u> ft.	
Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>1</u> ft.					
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>0.2</u> fps N/A <input type="checkbox"/>		Bank height Right: <u>2</u> ft. Left: <u>2.5</u> ft.	
Bank slope Right: <u>75</u> degrees Left: <u>90</u> degrees					
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input checked="" type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% <u>5</u> % <u>25</u> % _____% <u>60</u> % <u>10</u> % _____%					
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) <u>10</u> in. <u>2</u> in. - _____in.			
Dominant Bank Vegetation (list): <i>Phalaris arundinacea, Alnus incana</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Overhanging <i>Alnus</i> , overhanging bank, roots; deep pools, riffles and runs					
Aquatic Organisms Observed (list):					
T&E Species Observed (list):					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality ^a : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:

swasw005

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Segment of camp four creek through corridor. Stream flows through forested and scrub shrub habitat

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

sasw005



sasw005



Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed swale/tributary to camp four creek		Waterbody ID: sasw006
Date: 9/23/2019				
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES/PS	Photos: 20190923_140047, 140114,
Tract Number(s): WI-AS-255.000		Nearest Milepost 35.1		Associated Wetland ID(s): wasw012f
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input checked="" type="checkbox"/> Other: forested swale				
OHWM Width: <u>1</u> ft. Height: <u>4</u> in N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: <u>3</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>3</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>1</u> ft.	Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>1</u> in	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <u>0</u> fps N/A <input checked="" type="checkbox"/>	Bank height Right: <u>0.5</u> ft. Left: <u>0.75</u> ft.		Bank slope Right: <u>90</u> degrees Left: <u>90</u> degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input checked="" type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: puddles				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% _____% _____% _____% _____% <u>100</u> % _____%				
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <u>10</u> in. <u>3</u> in. _____in.			
Dominant Bank Vegetation (list): <i>Ulmus americana, Fraxinus pennsylvanica, Solidago gigantea, Carex bromoides</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Tussocks, leaf litter				
Aquatic Organisms Observed (list): none				
T&E Species Observed (list):				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

sasw006

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream is a forested swale with minimal water or flow. Provides minimal habitat, some hydrology functions

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

sasw006



Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Camp Four Creek		Waterbody ID: sasw003	Date: 9/20/2019
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES/PC	Photos: 20190920_123114, 7416	
Tract Number(s): WI-AS-256.000		Nearest Milepost 35.1		Associated Wetland ID(s): wasw009e, wasw010f, wasw011f	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>4</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>4</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	
Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>0.3</u> ft.					
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>0.25</u> fps N/A <input type="checkbox"/>		Bank height Right: <u>10</u> in Left: <u>10</u> in	
Bank slope Right: <u>70</u> degrees Left: <u>70</u> degrees					
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% <u>75</u> % _____% _____% <u>15</u> % <u>10</u> % _____%					
Width of Riparian Zone: N/A <input type="checkbox"/> _____ ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) <u>10</u> in. <u>2</u> in. _____ in.			
Dominant Bank Vegetation (list): <i>Betula alleghaniensis, Glyceria striata, Carex intumescens, Carex bromoides</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Riffles and runs present, cobble with leaf packs					
Aquatic Organisms Observed (list): None					
T&E Species Observed (list):					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality ^a : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:

Sasw003

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

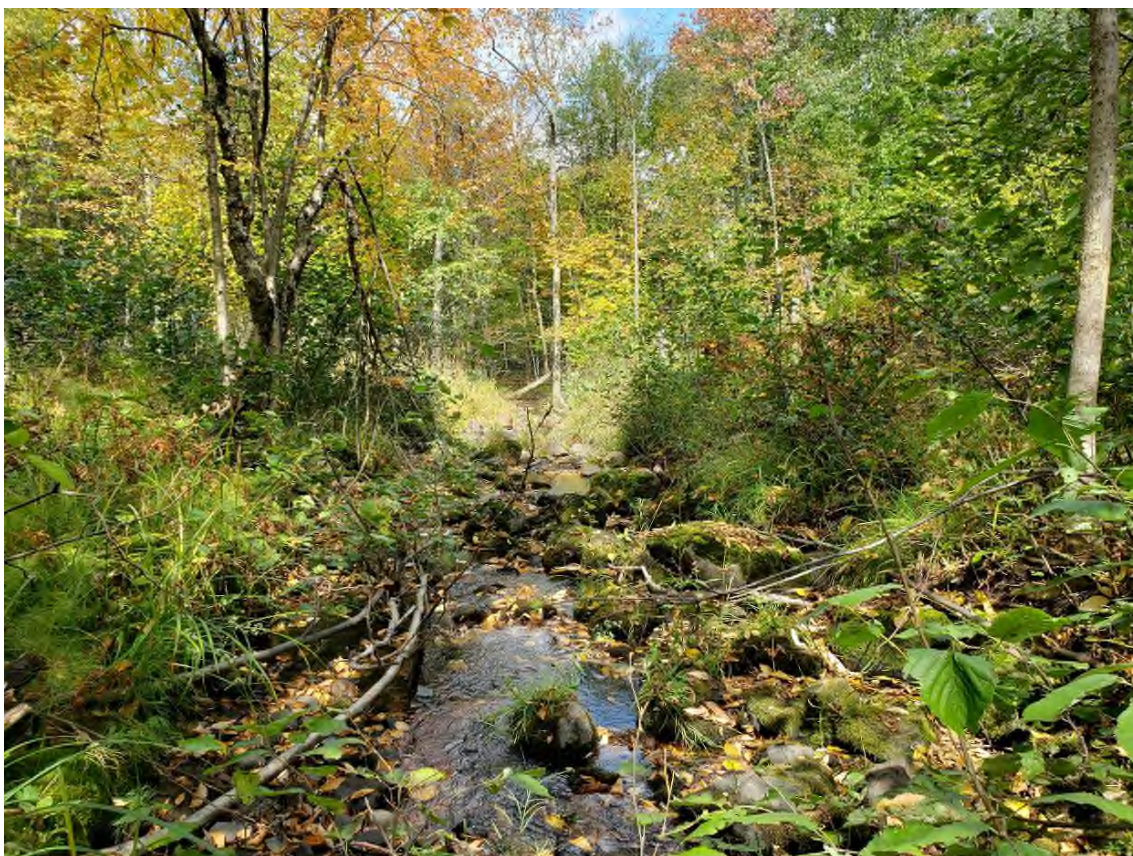
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Camp four creek

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

sasw003



Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-08	Waterbody Survey ID: sirb015e
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: NTT/SAM	Latitude: 46.381234	Longitude: -90.548821
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The waterbody is a roadside ditch that is adjacent to a gravel road.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Eurybia macrophylla, Phalaris arundinacea, Poa pratensis, Pteridium aquilinum, Scirpus cyperinus. Adjacent to a mesic hardwood system.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Artificial in origin.			
Observation Notes: Feature continues outside the survey corridor.			



sirb015e_E (across)



sirb015e_N (upstream)



sirb015e_S (downstream)

Waterbody Data Sheet

Description					
Project Name: Line 5 Relocation Project		Date: 2019-09-21		Waterbody Survey ID: sirb010p	
State: WI		County/Parish: Iron		USGS Waterbody Name: UNT to Feldcher Creek	
Company: Enbridge		Crew Member Initials: MAL/SAM		Latitude: 46.383586	
				Longitude: -90.548099	
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>					
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>					
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>					
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>					
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>					
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>					
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>					
Description Notes: The feature runs through a hardwood swamp (wirb027f) and connects to sirb009p outside the survey area.					
Measurements					
Depth of Water: <u>1</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>2</u> ft. N/A <input type="checkbox"/>		OHWM Width: <u>5</u> ft.	
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>					
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change					
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>					
Observations					
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>					
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>					
Dominant Bank Vegetation (list): The banks include Fraxinus nigra, Ulmus americana, Acer saccharum, and Tilia americana. The herbaceous layer contains Osmunda claytoniana, Athyrium filix-femina, Carex gracillima, and Carex pedunculata.					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Shallow running water as well as pools of standing water are present.					
Aquatic Organisms Observed (list): Water striders.					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): The feature experiences erosion along its banks.					
Observation Notes: The waterbody continues out of the black ash swamp to sirb009p which is adjacent to an unpaved road.					



sirb010p_E (upstream)



sirb010p_SW (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-20	Waterbody Survey ID: sirb009p
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: MAL/ SAM	Latitude: 46.384582	Longitude: -90.548507
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature is a swale running S-N parallel to an unpaved road. It connects to sirb010p outside the survey corridor.			
Measurements			
Depth of Water: <u>1</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>1</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>3</u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Acer saccharum, Ulmus americana, Athyrium filix-femina, Tilia americana.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/rocks, leaf packs, large submerged wood, riffles, deep pools, etc.): Small pools of water dispersed throughout swale as well as portions of running water.			
Aquatic Organisms Observed (list): Frogs, water striders.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Erosion along the banks exposing tree roots. Runoff from roadway.			
Observation Notes: Portions of the waterbody susceptible to erosion; banks heavily incised at points.			



sirb009p_E (across)



sirb009p_N (downstream)



sirb009p_S (upstream)

APPENDIX F

Waterbody Data Sheets

Part 21 of 24

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-20	Waterbody Survey ID: sirb008e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Feldcher Creek	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.384876	Longitude: -90.546659
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Vegetated ephemeral swale running parallel (E-W) to an OHV road and the margin of a mesic hardwood forest.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Acer saccharum, Ulmus americana, Dryopteris intermedia.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Disturbances include the OHV trail.			
Observation Notes: There is no standing water at the time of survey.			



sirb008e_E (upstream)



sirb008e_S (across)



sirb008e_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-19	Waterbody Survey ID: sirb006e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Feldcher Creek	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.386100	Longitude: -90.543567
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: A small manipulated swale associated with a collapsed culvert adjacent to an access road.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): The feature runs through the margin of a mesic hardwood forest. Dominant bank vegetation includes Athyrium filix-femina, Acer saccharum, and Fraxinus nigra.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: There is no water present at the time of survey.			



sirb006e_E (downstream)



sirb006e_N (across)



sirb006c_W (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-19	Waterbody Survey ID: sirb007e
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.387401	Longitude: -90.540222
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature is a densely vegetated swale associated with a broken, segmented, culvert.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: ____1____ ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): The swale runs through a mesic hardwood forest.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): The banks of the feature are eroded, exposing shrub roots.			
Observation Notes: The swale runs adjacent to an access road. There is no water present at the time of survey.			



sirb007e_E (upstream)



sirb007e_N (across)



sirb007e_NW (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-17	Waterbody Survey ID: sirb001e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Feldcher Creek	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.391690	Longitude: -90.547826
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input checked="" type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: Ephemeral stream flowing between two wetland features (wirb006f and wirb007f).			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 4 </u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Betula alleghaniensis, Fraxinus pennsylvanica, and Ostrya virginiana.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is an ephemeral stream flowing through woodland. There is no water present at the time of survey.			



sirb001e_N (downstream)



sirb001e_S (upstream)



sirb001e_W (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-17	Waterbody Survey ID: sirb002e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Feldcher Creek	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.391865	Longitude: -90.547929
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature is an ephemeral waterbody within mesic hardwood forest. There was no water present at the time of survey.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 3 </u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Fraxinus pennsylvanica, Athyrium filix-femina.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The waterbody branches off of feature sirb001e.			



sirb002e_N (downstream)



sirb002e_S (upstream)



sirb002e_W (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-17	Waterbody Survey ID: sirb003e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Feldcher Creek	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.392496	Longitude: -90.546486
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The stream is a connecting feature running from wirb008f into wirb009e.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 3 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): The feature is surrounded by mesic hardwood forest.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): The feature is disturbed by erosion at the banks.			
Observation Notes: The feature runs from upland mesic hardwood into disturbed fresh wet meadow. There is currently no water in the feature.			



sirb003e_E (downstream)



sirb003e_S (across)



sirb003e_W (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-17	Waterbody Survey ID: sirb004e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Feldcher Creek	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.393208	Longitude: -90.547300
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The waterbody forms and dissipates within a wetland feature (wirb009).			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Fraxinus nigra, Ulmus americana, Acer saccharum, Carex radiata, Athyrium filix-femina.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature does not contain water at the time of survey.			



sirb004e_E (upstream)



sirb004e_N (across)



sirb004e_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-18	Waterbody Survey ID: sirb005p
State: WI	County/Parish: Iron	USGS Waterbody Name: Feldcher Creek	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.397002	Longitude: -90.543266
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The stream is densely vegetated and is associated with a wetland complex (wirb015). There is no defined bank as the feature dissipates within the wetland.			
Measurements			
Depth of Water: <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>4</u> ft. <input type="checkbox"/> N/A	OHWM Width: <u>5</u> ft.
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): The banks of the stream have similar species composition to the connected wetland feature including Alnus incana, Scirpus cyperinus, Scirpus atrovirens, Agrostis gigantea, and Solidago canadensis.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Standing water is present.			
Aquatic Organisms Observed (list): Common green darner, unknown fish sp., water striders, northern leopard frog.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): There is moderate invasive species cover within close proximity of the waterbody. The feature is modified by beaver activity.			
Observation Notes: The feature runs roughly N-S before dissipating into wetland wirb015. The feature is also associated with a beaver impoundment.			



sirb005p_E (downstream)



sirb005p_N (across)



sirb005p_W (upstream)

Open Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-02	Waterbody Survey ID: oase001
State: WI	County/Parish: Ashland	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: NTT/ARK/MAL	Latitude: 46.404324	Longitude: -90.566241
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> Stock Pond <input checked="" type="checkbox"/> Natural Pond <input type="checkbox"/> Fishing Pond <input type="checkbox"/> Lake <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Feature Quality: <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Description Notes: The open waterbody is a large natural pond located along a farm access road. Waterbody is associated with an emergent wetland (wase033e).			
Measurements			
Depth of Water: <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Phalaris arundinacea, Bidens sp.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Large open pond with roughly a foot of standing water. Likely inundated all year.			
Aquatic Organisms Observed (list): Tadpoles, frogs, minnows.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from adjacent road.			
Observation Notes: Feature continues outside survey corridor.			



oase001_E



oase001_S



oase001_SW

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-02	Waterbody Survey ID: sasc031i
State: WI	County/Parish: Ashland	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: BRG/JSW	Latitude: 46.407338	Longitude: -90.555713
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: The feature is a small stream connecting two alder thicket wetlands via a culvert under a dirt road.			
Measurements			
Depth of Water: <u>0.3</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>2</u> ft. N/A <input type="checkbox"/>	
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Populus tremuloides, Alnus incana, Glyceria striata, Carex crinita, Symphyotrichum lateriflorum.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Overhanging vegetation.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from dirt road.			
Observation Notes: The stream has been somewhat affected by the dirt road.			



sasc031i_E (upstream)



sasc031i_S (across)



sasc031i_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-02	Waterbody Survey ID: sasc030i
State: WI	County/Parish: Ashland	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: BRG/JSW	Latitude: 46.408530	Longitude: -90.555050
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature is a small stream that runs from a young forest under a dirt road via a culvert. The feature then flows into an open waterbody that was created by a beaver dam.			
Measurements			
Depth of Water: <u>0.4</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>3</u> ft. N/A <input type="checkbox"/>	
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Acer rubrum, Populus tremuloides, Alnus incana, Cornus sericea, Carex crinita, Impatiens capensis, Glyceria grandis, Carex retrorsa.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Riffles, overhanging vegetation.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from dirt road, culvert, downstream beaver dam, historic logging activity.			
Observation Notes: The feature is somewhat disrupted by historic logging activity and road runoff, and is associated with alder thicket wetland wasc045s.			



sasc030i_E (upstream)



sasc030i_S (across)



sasc030i_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-01	Waterbody Survey ID: sirc006e
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: BRG/JSW	Latitude: 46.403399	Longitude: -90.545321
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature is a small erosional stream that only exists as a result of runoff from the adjacent gravel road and associated culvert. It is a partially excavated artificial feature.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Populus tremuloides, Fraxinus nigra, Rubus idaeus, Osmunda claytoniana, Hypericum perforatum, Oenothera biennis.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Erosion, runoff from gravel road, culverts.			
Observation Notes: The feature is artificial and of low quality, and is associated with several ditches.			



sirc006e_NW (upstream)



sirc006e_SE (downstream)



sirc006e_SW (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-01	Waterbody Survey ID: sirc008e
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: BRG/JSW	Latitude: 46.403284	Longitude: -90.545308
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: The feature is a small erosional ditch that borders a gravel road.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Populus tremuloides, Acer saccharum, Rubus idaeus, Hypericum perforatum.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from gravel road.			
Observation Notes: The feature is associated with a culvert. Flows into sirc006e.			



sirc008e_NE (downstream)



sirc008e_NW (across)



sirc008e_SW (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-01	Waterbody Survey ID: sirc007e
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: BRG/JSW	Latitude: 46.403528	Longitude: -90.545144
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature is a small erosional ditch on the side of a gravel road.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/> OHWM Width: <u>1</u> ft.	
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Rubus idaeus, Oenothera biennis, Bidens frondosa, Hypericum perforatum, Persicaria sagittata, Scirpus hattorianus.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from gravel road.			
Observation Notes: The ditch feeds into ephemeral stream sirc006e.			



sirc007e_NE (upstream)



sirc007e_NW (across)



sirc007e_SW (downstream)

APPENDIX F

Waterbody Data Sheets

Part 22 of 24

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-01	Waterbody Survey ID: sire002e
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: NTT/MAL/ARK	Latitude: 46.403705	Longitude: -90.544776
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The waterbody is an ephemeral ditch that runs along a gravel road. Ditch has been recently excavated. Ditch crosses through culvert under the road to the south and continues through a mesic hardwood forest.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): No vegetation throughout ditch.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Recently excavated.			
Observation Notes: None.			



sire002e_NE (upstream)



sire002e_SE (across)



sire002e_SW (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-01	Waterbody Survey ID: sire003e
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: NTT/MAL/ARK	Latitude: 46.403895	Longitude: -90.544462
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: Artificial ditch feature that flows into another ditch (sire002e). No water currently present.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): No vegetation present.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Waterbody was recently excavated.			
Observation Notes: None.			



sire003e_NE (upstream)



sire003e_SE (across)



sire003e_SW (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-01	Waterbody Survey ID: sire001i
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: NTT/ARK/MAL	Latitude: 46.404813	Longitude: -90.543385
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The waterbody is an intermittent stream that meanders across an access road through a culvert and disperses into a mapped wetland wire002f.			
Measurements			
Depth of Water: <u>2</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>3</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>3</u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Fraxinus nigra, Matteuccia struthiopteris, Carex bromoides, and Calamagrostis canadensis.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Standing water, overhanging vegetation.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Located along frequently traveled access road. Culvert under roadside.			
Observation Notes: Feature continues outside survey corridor.			



sire001i_E (downstream)



sire001i_N (across)



sire001i_W (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-24	Waterbody Survey ID: sird010e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Feldcher Creek	
Company: Enbridge	Crew Member Initials: AGG/MDL	Latitude: 46.405698	Longitude: -90.532118
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Ephemeral feature flowing through mesic forest.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 7 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Fraxinus nigra, Athyrium angustum, Calamagrostis canadensis.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Logging road.			
Observation Notes: The feature is a narrow ephemeral stream located within a larger swale. There is a logging road to the south of the feature that impacts the flow.			



sird010e_E (across)



sird010e_N (upstream)



sird010e_S (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-18	Waterbody Survey ID: sira004p
State: WI	County/Parish: Iron	USGS Waterbody Name: Tyler Forks	
Company: Enbridge	Crew Member Initials: KDF/DGL/BRG	Latitude: 46.413432	Longitude: -90.516672
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The river is located within mesic hardwood forest, with public access on both sides via logging road.			
Measurements			
Depth of Water: _____ ft. N/A <input type="checkbox"/> Unknown <input checked="" type="checkbox"/>		Water Edge to Water Edge: <u>25</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>25</u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Abies balsamea, Acer saccharinum, Tsuga canadensis, Betula alleghaniensis, Ulmus americana, Acer rubrum, Carex cf. gracillima.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Downed woody debris, overhanging banks and roots, riffles.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Significant bank erosion on west side of stream.			
Observation Notes: Feature continues outside survey corridor.			



sira004p_N (downstream)



sira004p_S (upstream)



sira004p_W (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-18	Waterbody Survey ID: sira005i
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Tyler Forks	
Company: Enbridge	Crew Member Initials: BRG/DGL	Latitude: 46.413370	Longitude: -90.516012
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature is a small stream that runs through a hardwood swamp and through a culvert beneath a gravel road.			
Measurements			
Depth of Water: <u>0.3</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>4</u> ft. N/A <input type="checkbox"/>	
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Ulmus americana, Fraxinus nigra, Betula alleghaniensis, Carex crinita, Glyceria striata.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Riffles.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from gravel road, culvert.			
Observation Notes: The stream eventually feeds into a perennial river (sira004p) outside of the survey area.			



sira005i_E (across)



sira005i_N (upstream)



sira005i_S (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-18	Waterbody Survey ID: sira006i
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Tyler Forks	
Company: Enbridge	Crew Member Initials: BRG/JSW	Latitude: 46.413442	Longitude: -90.515709
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: The feature is a small ditch running parallel to a gravel logging road.			
Measurements			
Depth of Water: <u>0.2</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>3</u> ft. N/A <input type="checkbox"/>	
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Fraxinus nigra, Rubus idaeus.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Receives runoff from gravel road.			
Observation Notes: Feature flows into sira005i and ultimately enters Tyler Forks (sira004p) outside the survey area.			



sira006i_E (upstream)



sira006i_S (across)



sira006i_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-18	Waterbody Survey ID: sira007i
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: BRG/DGL	Latitude: 46.414190	Longitude: -90.510960
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The stream originates from a culvert under a gravel road, and runs through the edge of a hardwood swamp (wira040f). Feature discharges into wetland wira039s.			
Measurements			
Depth of Water: <u>1.2</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>7</u> ft. N/A <input type="checkbox"/>	
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Fraxinus nigra, Acer rubrum, Carex bromoides, Solidago gigantea, Carex crinita, Juncus effusus, Calamagrostis canadensis.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Open water.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from gravel road.			
Observation Notes: The feature is of diminished quality due to the intersecting road. The wetland feeds the stream with some water.			



sira007i_E (upstream)



sira007i_S (across)



sira007i_W (downstream)

Open Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-23	Waterbody Survey ID: oirb001
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.422628	Longitude: -90.515690
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input type="checkbox"/> Fishing Pond <input type="checkbox"/> Lake <input checked="" type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Feature Quality: <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Description Notes: Oxbow associated with Tyler Forks. Receives water from sirb013p.			
Measurements			
Depth of Water: <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Acer saccharinum, Acer rubrum, Tilia americana, Fraxinus nigra, Athyrium angustum, Onoclea sensibilis.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Open water.			
Aquatic Organisms Observed (list): Water striders, frogs.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): The connected waterbodies sirb012p and sirb013p are influenced by beaver activity.			
Observation Notes: None.			



oirb001_E



oirb001_N



oirb001_S

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-23	Waterbody Survey ID: sirb013p
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Tyler Forks	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.423075	Longitude: -90.515768
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: The waterbody runs through mesic hardwood forest and into Tyler Forks (sirb012p).			
Measurements			
Depth of Water: <u>1.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>15</u> ft. <input type="checkbox"/> N/A	OHWM Width: <u>15</u> ft.
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Acer saccharinum, Fraxinus nigra, Onoclea sensibilis, Athyrium filix-femina, Symphyotrichum lateriflorum.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Flowing water, woody debris.			
Aquatic Organisms Observed (list): Water striders, frogs.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: None.			



sirb013p_E (upstream)



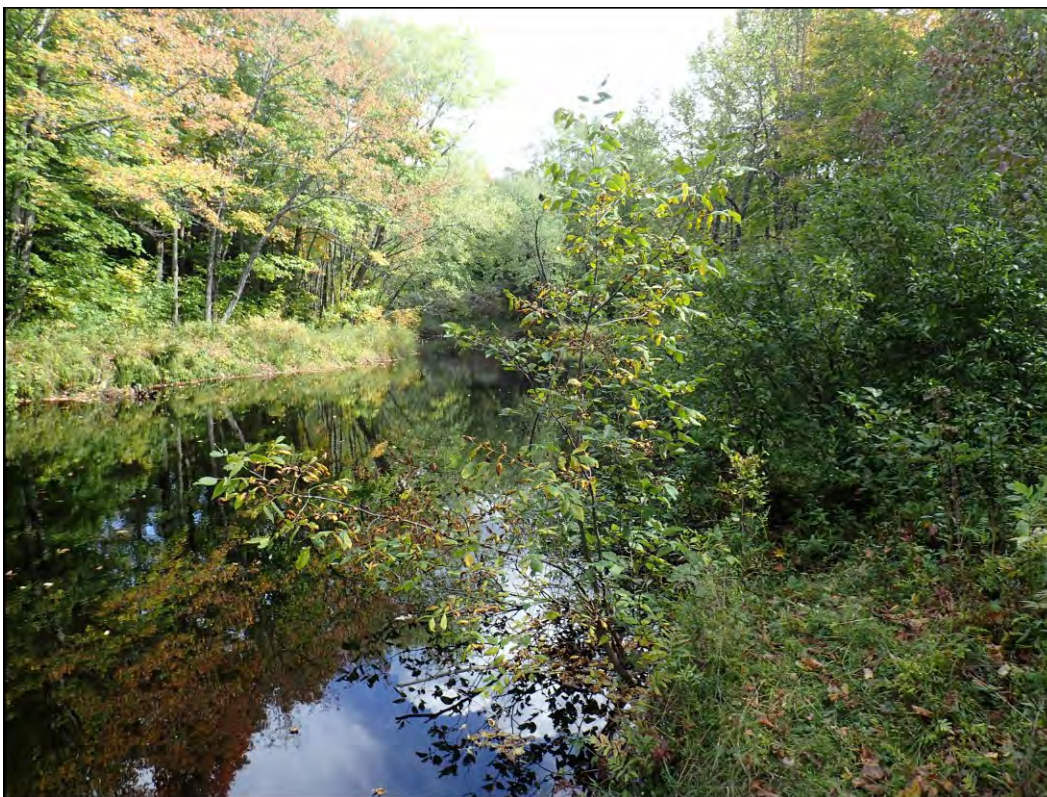
sirb013p_S (across)



sirb013p_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-23	Waterbody Survey ID: sirb012p
State: WI	County/Parish: Iron	USGS Waterbody Name: Tyler Forks	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.423174	Longitude: -90.516738
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: This waterbody is associated with wetlands wirb037s and wirc023f. The banks are densely vegetated.			
Measurements			
Depth of Water: <u>2</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>50</u> ft. <input type="checkbox"/> N/A	
OHWM Width: <u>50</u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Acer saccharinum, Acer saccharum, Tilia americana, Alnus incana, Athyrium filix-femina.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Flowing water.			
Aquatic Organisms Observed (list): Dragonflies, frogs, garter snake.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): The feature has been influenced by beaver activity.			
Observation Notes: None.			



sirb012p_E (upstream)



sirb012p_N (across)



sirb012p_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-23	Waterbody Survey ID: sirc005e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Tyler Forks	
Company: Enbridge	Crew Member Initials: BRG/JSW	Latitude: 46.423736	Longitude: -90.516121
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Water is absent along a majority of the stream, but some pockets of stationary water were observed at the time of survey. Waterbody is associated with wirc022f.			
Measurements			
Depth of Water: <u>0.2</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> OHWM Width: <u>6</u> ft.	
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Acer saccharum, Tilia americana, Betula alleghaniensis, Fraxinus nigra, Lycopodium uniflorum, Athyrium angustum, Carex gracillima.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Overhanging vegetation.			
Aquatic Organisms Observed (list): Frogs.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature likely only carries flowing water after flooding/heavy rain events, and is erosional in nature.			



sirc005e_E (downstream)



sirc005e_S (across)



sirc005e_W (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-23	Waterbody Survey ID: sirc004e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Tyler Forks	
Company: Enbridge	Crew Member Initials: BRG/JSW	Latitude: 46.424390	Longitude: -90.515937
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: The stream is an erosional feature that flows from wetland wirc021f into wirc022f.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Fraxinus nigra, Acer saccharum, Prunus serotina, Dryopteris intermedia.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is erosional and has steep banks.			



sirc004e_E (upstream)



sirc004e_S (across)



sirc004e_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-23	Waterbody Survey ID: sirc003e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Tyler Forks	
Company: Enbridge	Crew Member Initials: BRG/JSW	Latitude: 46.424449	Longitude: -90.515998
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: The stream is a small feature running down a slope, from wetland wirc021f into wirc022f.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Fraxinus nigra, Acer saccharum, Dryopteris intermedia, Prunus serotina.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is somewhat erosional, and likely only carries water for a short period of time following rain events.			



sirc003e_E (upstream)



sirc003e_N (across)



sirc003e_W (downstream)

APPENDIX F

Waterbody Data Sheets

Part 23 of 24

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-21	Waterbody Survey ID: sirc002p
State: WI	County/Parish: Iron	USGS Waterbody Name: Vogue Creek	
Company: Enbridge	Crew Member Initials: BRG/JSW	Latitude: 46.421019	Longitude: -90.504350
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The stream is a high-quality feature, but receives some runoff from the compacted soils of the trail running across it. A small wooden bridge has been placed over the stream.			
Measurements			
Depth of Water: <u>1</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>10</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>10</u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Acer saccharum, Ulmus americana, Betula alleghaniensis, Fraxinus nigra, Alnus incana, Carex crinita, Scirpus hattorianus, Glyceria striata.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, overhanging vegetation.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from intersecting unpaved path.			
Observation Notes: Banks have been scoured by erosion and are approximately 1 foot high in places.			



sirc002p_N (downstream)



sirc002p_S (upstream)



sirc002p_W (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-18	Waterbody Survey ID: sird018p
State: WI	County/Parish: Iron	USGS Waterbody Name: Vogue Creek	
Company: Enbridge	Crew Member Initials: MAL/AGG	Latitude: 46.418982	Longitude: -90.501244
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature is associated with a culvert and runs through an alder thicket (wird047s).			
Measurements			
Depth of Water: <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>6</u> ft. <input type="checkbox"/> N/A	OHWM Width: <u>6</u> ft.
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Alnus incana, Calamagrostis canadensis.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Riffles, overhanging vegetation.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): The surrounding area was recently logged.			
Observation Notes: The feature has densely vegetated banks and has some riprap.			



sird018p_NW (across)



sird018p_SE (upstream)



sird018p_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-10-18	Waterbody Survey ID: sird017e
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: MAL/AGG	Latitude: 46.424387	Longitude: -90.494029
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: No water observed at the time of survey. The feature originates at the edge of an access road and dissipates as it enters the forest to the west.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 6 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Acer saccharum, Tilia americana, Fraxinus nigra, Carex crinita, Athyrium filix-femina.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): The banks of the feature have been eroded and the margins of the waterbody have been logged recently.			
Observation Notes: The waterbody receives water from the wetland to the east (wird040f). The surrounding buffer has been recently logged.			



sird017e_E (upstream)



sird017e_N (across)



sird017e_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-16	Waterbody Survey ID: sirc001e
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: JSW/BRG	Latitude: 46.434834	Longitude: -90.498519
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature is a ditch that directs surface flow westward into a wetland (wirc001e).			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 1 </u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Scirpus hattorianus, Agrostis gigantea, Solidago gigantea.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Gravel road runoff.			
Observation Notes: None.			



sirc001e_E (upstream)



sirc001e_N (across)



sirc001e_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-17	Waterbody Survey ID: sira001i
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Potato River	
Company: Enbridge	Crew Member Initials: NTT/DGL	Latitude: 46.443608	Longitude: -90.490710
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input checked="" type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: The waterbody is an intermittent stream that flows through a large forested wetland complex (wira008f). Surrounding vegetation is dominated by speckled alder and Bidens.			
Measurements			
Depth of Water: <u>2</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>4</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>6</u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Ludwigia palustris, Carex crinita, Alnus incana, Carex lacustris, Cirsium arvense.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools of water surrounding waterbody.			
Aquatic Organisms Observed (list): Frogs, aquatic invertebrates.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Surrounding area has been heavily logged. Beaver activity around.			
Observation Notes: None.			



sira001i_E (downstream)



sira001i_S (upstream)



sira001i_W (across)

Open Waterbody Data Sheet

Survey Description					
Project Name: Line 5		Waterbody Name: Unnamed Pond adjacent to Potato River		Waterbody ID: OIRV001	Date: 9/18/2019
State: Wisconsin	County: Iron	Company: VHB	Crew Member Initials: CS, CC	Photos: Yes	
Tract Number(s): WI-IR-012.001, WI-IR-012.002		Nearest Milepost: 37.60		Associated Wetland ID(s): N/A	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Waterbody Type: (check one) <input type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input type="checkbox"/> Lake <input type="checkbox"/> Reservoir <input type="checkbox"/> Impoundment <input checked="" type="checkbox"/> Oxbow <input type="checkbox"/> Other:					
Hydrologic Regime: <input checked="" type="checkbox"/> Permanently Flooded <input type="checkbox"/> Semipermanently Flooded <input type="checkbox"/> Seasonally Flooded <input type="checkbox"/> Temporarily Flooded					
OHWM Height: <u>N/A</u> ft.		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Depth of Water: <u>>3</u> ft. N/A <input type="checkbox"/>		Bank height (average): <u>10</u> ft.		Bank slope (average): <u>60</u> degrees	
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:					
% of Substrate: % % % % % % <u>100</u> % %					
Width of Riparian Zone: <u> </u> ft. N/A <input type="checkbox"/>		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input type="checkbox"/> Herbs Avg. DBH of Dominants: <u> </u> in. <u>2</u> in. <u> </u> in. (approx.)			
Dominant Bank Vegetation (list): <i>Corylus americana, Fraxinus nigra, Prunus virginiana, Abies balsamea</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Submerged and emerged aquatic vegetation (<i>Typha x glauca</i> , etc.), large submerged wood					
Aquatic Organisms Observed (list): N/A					
T&E Species Observed (list): N/A					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): N/A					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Waterbody Quality ^a: (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:

OIRV001

^a **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

A review of historic aerials indicates that this is an oxbow pond created from the Potato River. There is a small island present in the middle of the waterbody outside of the study area with *Alnus incana* and *Carex* spp.

An old metal boat is present on far side of waterbody.

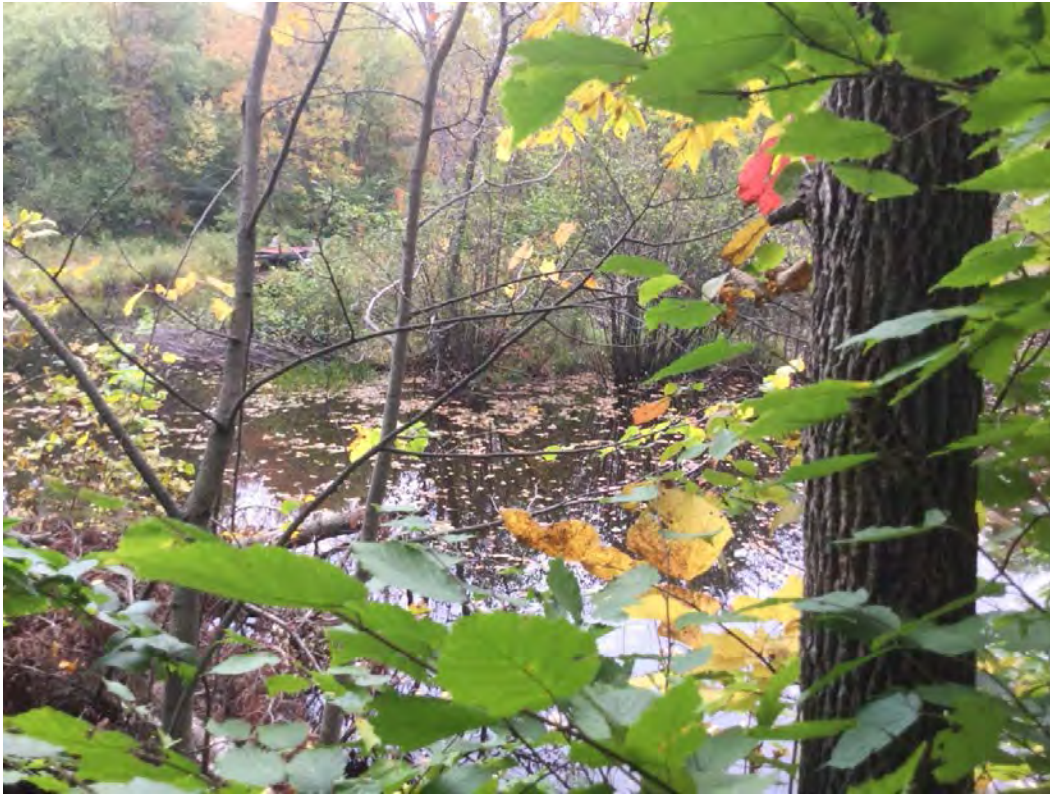
Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point locations, survey boundary, and IDs of associated features)



Scale – 1:4,000



Scale – 1:350



Photograph 1: OIRV001, Northeast



Photograph 2: OIRV001, North



Photograph 3: OIRV001, Northwest

Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed swale, roadside ditch		Waterbody ID: sirw002
State: WI		County: Iron	Company: WEST	Crew Member Initials: ES/PC
Tract Number(s): WI-IR-009.000		Nearest Milepost 42.2		Photos: 20190919_141512...115142, 20190919_141437.
Associated Wetland ID(s): wirw006e				
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other: Forested swale on roadside				
OHWM Width: _____ ft. Height: _____ ft. N/A <input checked="" type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: _____ ft. 1 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _____ ft. 4 ft.	Width of Waterbody - Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	Depth of Water: (Approx.) _____ ft. N/A <input checked="" type="checkbox"/>	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: (Approx.) _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: _____ ft. Left: _____ ft. 1 ft. 1 ft.		Bank slope Right: _____ degrees Left: _____ degrees 35 degrees 35 degrees
Qualitative Attributes				
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% _____% _____% 60% 40% _____%				
Width of Riparian Zone: _____ ft. N/A <input checked="" type="checkbox"/>	Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input type="checkbox"/> Saplings/Shrubs: <input type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) 16 in. 2 in. _____ in.			
Dominant Bank Vegetation (list): Tsuga Canadensis, Osmunda claytonia				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): N/A				
Aquatic Organisms Observed (list): N/A				
T&E Species Observed (list):				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Roadside vehicle use, soil compaction				
Waterbody is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated				
Stream Quality ^a: (check one) <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low				

Waterbody ID:

sirw002

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Feature is roadside swale for drainage purposes. No water, flow, or aquatic habitat present

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



sinw002



Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed tributary to Potato River		Waterbody ID: sirw001	Date: 9/18/2019
State: WI	County: Iron	Company: WEST	Crew Member Initials: ES, PS	Photos: 7310,7311,7321	
Tract Number(s): WI-IR-009.000		Nearest Milepost 42.2		Associated Wetland ID(s): wirw001e (emergent wetland on banks)	
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>6</u> ft. Height: <u>4</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>8</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>8</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>3</u> ft.	
Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>1</u> ft.		Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>0.1</u> fps N/A <input type="checkbox"/>	
Bank height Right: <u>3</u> ft. Left: <u>2</u> ft.		Bank slope Right: <u>90</u> degrees Left: <u>60</u> degrees			
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% _____% <u>60</u> % _____% <u>25</u> % <u>15</u> % _____%					
Width of Riparian Zone: N/A <input type="checkbox"/> _____ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input type="checkbox"/> Saplings/Shrubs: <input type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) <u>12</u> in. <u>3</u> in. - _____in.			
Dominant Bank Vegetation (list): <i>Ulmus americana, Glyceria striata, Phalaris arundinacea, Onoclea sensibilis</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): overhanging banks/roots, overhanging alder branches					
Aquatic Organisms Observed (list): small fish 3-5 inches					
T&E Species Observed (list):					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): flows under two track dirt road, metal bridge on concrete supports					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality ^a : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

Waterbody ID:

sirw001

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch *(Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)*

sinw001



sinw001



Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed Tributary to Potato River		Waterbody ID: SIRV001p
Date: 09/18/2019				
State: Wisconsin	County: Iron	Company: VHB	Crew Member Initials: CS, CC	Photos: 3 (US, DS, CS)
Tract Number(s): WI-IR-014.000		Nearest Milepost: 37.80		Associated Wetland ID(s): WIRV004, WIRV005
Survey Type: (check one) <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 20 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
OHWM Height: 2.5 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 20 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 20 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 20 ft.
Depth of Water: (Approx.) N/A <input type="checkbox"/> 2 ft.				
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 1 fps N/A <input type="checkbox"/>		Bank height Right: 2.5 ft. Left: 1.5 ft.
				Bank slope Right: 70 degrees Left: 90 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: Rip Rap				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% 45 % 45 % _____% 10 % _____%				
Width of Riparian Zone: N/A <input type="checkbox"/> >200 ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: _____in. <input checked="" type="checkbox"/> Saplings/Shrubs: 2 in. <input checked="" type="checkbox"/> Herbs		
		Avg. DBH of Dominants: (approx.)		
Dominant Bank Vegetation (list): <i>Verbena hastata, Alnus incana, Onoclea sensibilis</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Overhanging roots, deep pools, riffles				
Aquatic Organisms Observed (list): Fish				
T&E Species Observed (list): N/A				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): N/A				
Tributary is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ^a : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SIRV001p

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Signs of high flow during storm events (wrack lines above TOB). Stream widens, slows, and becomes deeper north of the access road. There is a small beaver lodge on the right bank of the stream just outside of the study area.

The stream is spanned by a wooden bridge as part of the access road.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Scale - 1:4,500



Scale - 1:350



Photograph 1: SIRV001p, West, Across stream



Photograph 2: SIRV001p, South, Downstream



Photograph 3: SIRV001p, North, Upstream

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-19	Waterbody Survey ID: sira002p
State: WI	County/Parish: Iron	USGS Waterbody Name: Potato River	
Company: Enbridge	Crew Member Initials: NTT/DGL	Latitude: 46.464627	Longitude: -90.480702
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: The waterbody is a perennial river that meanders through a mesic hardwood forest. Riffles and pools of water throughout with several gravel bars along the waterbody edge. Litter and debris piles along the steep river banks.			
Measurements			
Depth of Water: _____ ft. N/A <input type="checkbox"/> Unknown <input checked="" type="checkbox"/>		Water Edge to Water Edge: <u>40</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>50</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Acer saccharum, Abies balsamea, Ulmus americana.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Runs, riffles, pools, gravel bars, and woody debris providing habitat for aquatic invertebrates, amphibians, and fish.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Heavily eroded banks. ATV trail along river edge.			
Observation Notes: None.			



sira002p_E (across)



sira002p_NE (upstream)



sira002p_SE (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-18	Waterbody Survey ID: sird002p
State: WI	County/Parish: Iron	USGS Waterbody Name: Potato River	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.466585	Longitude: -90.481020
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: Perennial feature is another component of the Potato River, which is also mapped as sird001p to the north.			
Measurements			
Depth of Water: <u>2</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>25</u> ft. <input type="checkbox"/> N/A	
OHWM Width: <u>40</u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Abies balsamea, Solidago gigantea, Fraxinus nigra, Acer saccharum, Matteuccia struthiopteris.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, riffles and runs, gravel bars.			
Aquatic Organisms Observed (list): Invertebrates, amphibians, fish.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is a perennial waterbody that flows through woodland.			



sird002p_E (across)



sird002p_N (downstream)



sird002p_S (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-18	Waterbody Survey ID: sird001p
State: WI	County/Parish: Iron	USGS Waterbody Name: Potato River	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.468243	Longitude: -90.481725
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Perennial river (Potato River) with floodplain forest on both sides within survey area.			
Measurements			
Depth of Water: <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>35</u> ft. <input type="checkbox"/> N/A	OHWM Width: <u>40</u> ft.
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Fraxinus nigra, Acer saccharinum, Onoclea sensibilis, Matteuccia struthiopteris.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Gravel bars, riffles and runs, pools, litter and debris.			
Aquatic Organisms Observed (list): Amphibians, insects, fish.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is a perennial waterbody associated with wetland wurd001f.			



sird001p_E (upstream)



sird001p_N (across)



sird001p_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-19	Waterbody Survey ID: sira003p
State: WI	County/Parish: Iron	USGS Waterbody Name: Lawrence Creek	
Company: Enbridge	Crew Member Initials: NTT/DGL	Latitude: 46.468637	Longitude: -90.481369
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The waterbody is a perennial stream that meanders through a floodplain forest associated with the Potato River. The creek is a tributary to Potato River. Freshwater algae throughout with large rocks along the banks.			
Measurements			
Depth of Water: <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>25</u> ft. <input type="checkbox"/> N/A	
OHWM Width: <u>30</u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Fraxinus nigra, Acer saccharum, Matteuccia struthiopteris, Onoclea sensibilis, Equisetum palustris.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Riffles, pools.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: Waterbody flows through wetland wurd001f.			



sira003p_E



sira003p_N



sira003p_W

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-19	Waterbody Survey ID: sird003e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Potato Creek	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.469420	Longitude: -90.482615
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature is an ephemeral waterbody that flows though woodland and into the Potato River outside the survey corridor.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Acer saccharum, Abies balsamea.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: No water present at time of survey.			



sird003e_N (upstream)



sird003e_NW (across)



sird003e_S (downstream)

APPENDIX F

Waterbody Data Sheets

Part 24 of 24

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-20	Waterbody Survey ID: sird004e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.47809	Longitude: -90.482805
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: Ephemeral feature flowing through a hardwood swamp community (wird010f).			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 3 </u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Carex scabrata, Betula alleghaniensis, Osmunda claytoniana.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert.			
Observation Notes: The feature is an ephemeral stream that flows through woodland. The feature flows under a road through a culvert.			



sird004e_E (upstream)



sird004e_N (across)



sird004e_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-21	Waterbody Survey ID: sird005e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.480429	Longitude: -90.484288
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: Ephemeral stream flowing through a coniferous swamp (wird015f).			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 3 </u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Tsuga canadensis, Betula alleghaniensis, Acer rubrum, Athyrium filix-femina, Osmunda claytoniana.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is the outlet for wetland wird015f. The feature flows through conifer forest.			



sird005e_N (downstream)



sird005e_S (upstream)



sird005e_W (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-21	Waterbody Survey ID: sird006e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.480686	Longitude: -90.483782
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Ephemeral feature associated with a large forested wetland (wird015f).			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Tsuga canadensis, Osmunda claytoniana.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: This stream flows into stream sird005e. The feature is an outlet of wetland wird015f.			



sird006e_E (upstream)



sird006e_N (across)



sird006e_W (downstream)

Open Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-23	Waterbody Survey ID: oird001
State: WI	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: AGG/MDL	Latitude: 46.483223	Longitude: -90.484909
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input type="checkbox"/> Fishing Pond <input type="checkbox"/> Lake <input checked="" type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Feature Quality: <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low <i>(check one)</i>			
Feature Description: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Description Notes: Artificial pond located within a conifer swamp.			
Measurements			
Depth of Water: <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Tsuga canadensis, Scirpus cyperinus.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Shallow open water.			
Aquatic Organisms Observed (list): Insects.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is a man-made holding pond located within wetland wird019f.			



oird001_N



oird001_NW



oird001_W

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-23	Waterbody Survey ID: sird009p
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/MDL	Latitude: 46.484273	Longitude: -90.485652
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature has been manipulated by beaver dams.			
Measurements			
Depth of Water: <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>2</u> ft. <input type="checkbox"/> N/A	OHWM Width: <u>2</u> ft.
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Scirpus cyperinus, Phalaris arundinacea, Typha sp.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, riffles, runs.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Beaver dams, maintained powerline corridor.			
Observation Notes: The feature is a very narrow and incised waterbody that flows through a reed canary grass dominated swale. There are areas where the stream channel becomes wider due to beaver dams, but it quickly reverts to a more narrow channel.			



sird009p_E (upstream)



sird009p_S (across)



sird009p_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-21	Waterbody Survey ID: sird008i
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.486513	Longitude: -90.487393
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Small intermittent feature flowing through mesic forest.			
Measurements			
Depth of Water: <u>0.1</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>1</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>3</u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Acer saccharum, Osmunda claytoniana.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert.			
Observation Notes: The feature flows through a heavily incised channel and through a culvert under a railroad track.			



sird008i_E (across)



sird008i_N (downstream)



sird008i_S (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-21	Waterbody Survey ID: sird007i
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.486912	Longitude: -90.487501
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: Small intermittent feature flowing along the south side of a railroad track.			
Measurements			
Depth of Water: <u>0.1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>1</u> ft. <input type="checkbox"/> N/A	
OHWM Width: <u>2</u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Acer saccharum, Betula alleghaniensis.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Berm.			
Observation Notes: The feature runs along a man-made berm to create a railroad track. The feature terminates in sird008i.			



sird007i_E (upstream)



sird007i_S (across)



sird007i_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-21	Waterbody Survey ID: sirb011p
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: MAL/SAM	Latitude: 46.488919	Longitude: -90.488869
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature begins from a pipe running underneath a decommissioned railroad and flows north.			
Measurements			
Depth of Water: <u>0.25</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>1</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>3</u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input checked="" type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): The feature runs through a mesic hardwood forest. Dominant bank vegetation includes Acer saccharum, Tilia americana, Ulmus americana, Dryopteris intermedia, Phalaris arundinacea, Carex crinita, and Glyceria striata.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): The feature currently has minimal standing and running water.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): The waterbody has severe erosion in some areas with incising present at points.			
Observation Notes: The feature has minimal running water at the time of survey. The banks form a steep hillslope. Stream passes through several small wetland communities.			



sirb011p_N (downstream)



sirb011p_S (upstream)



sirb011p_SE (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-27	Waterbody Survey ID: sird013e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/MDL	Latitude: 46.489029	Longitude: -90.488645
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: Ephemeral stream flowing through a woodland.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Tsuga canadensis, Osmunda claytoniana.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is a heavily incised ephemeral stream that flows through woodland and terminates in a perennial waterbody to the west (sird011p).			



sird013e_E (upstream)



sird013e_N (across)



sird013e_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-26	Waterbody Survey ID: sird011i
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/MDL	Latitude: 46.489224	Longitude: -90.487938
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input checked="" type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: There is no flowing water present at the time of survey. There are pools present within the channel. Feature is associated with wetland wtd031e.			
Measurements			
Depth of Water: <u>0.1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>2</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> OHWM Width: <u>8</u> ft.	
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Carex crinita, Carex intumescens, Dryopteris intermedia, Abies balsamea, Tsuga canadensis.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Fence through channel.			
Observation Notes: The feature is a heavily incised stream located in a deep valley. The banks leading into the stream channel are very steep.			



sird011i_E (upstream)



sird011i_S (across)



sird01 li_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-26	Waterbody Survey ID: sird012i
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/MDL	Latitude: 46.489400	Longitude: -90.488683
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Human disturbance present. Flowing water present at time of survey.			
Measurements			
Depth of Water: <u>0.1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> OHWM Width: <u>4</u> ft.	
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Tsuga canadensis, Carex crinita.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Trash and litter in stream channel. Old broken water control structures.			
Observation Notes: The feature is a seep-fed stream. The channel is heavily incised. Associated with wetland wurd031e.			



sird012i_E (upstream)



sird012i_S (across)



sird012i_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-27	Waterbody Survey ID: sird014e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/MDL	Latitude: 46.489706	Longitude: -90.489016
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: The feature connects to a perennial stream outside the survey corridor.			
Measurements			
Depth of Water: _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: _____ ft. N/A <input checked="" type="checkbox"/>	
OHWM Width: <u> 2 </u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Tsuga canadensis, Dryopteris intermedia.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is a small ephemeral stream located within a large swale.			



sird014e_NE (upstream)



sird014e_S (across)



sird014e_SW (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-27	Waterbody Survey ID: sird015e
State: WI	County/Parish: Iron	USGS Waterbody Name: UNT to Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/MDL	Latitude: 46.491858	Longitude: -90.488854
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Ephemeral feature flows into a perennial waterbody outside the survey corridor. Associated with wetland wurd032s.			
Measurements			
Depth of Water: <u>0.1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> OHWM Width: <u>2</u> ft.	
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Abies balsamea, Betula alleghaniensis, Dryopteris intermedia.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, riffles.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature flows through a large swale into a wetland and then connects to Vaughn Creek.			



sird015e_E (across)



sird015e_N (downstream)



sird015e_S (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2019-09-27	Waterbody Survey ID: sird016p
State: WI	County/Parish: Iron	USGS Waterbody Name: Vaughn Creek	
Company: Enbridge	Crew Member Initials: AGG/MDL	Latitude: 46.492155	Longitude: -90.487007
Survey Type: <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
Existing Condition^a: <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
Flow Regime: <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
Description Notes: Perennial feature which flows through a mapped wetland (wird033f).			
Measurements			
Depth of Water: <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>6</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> OHWM Width: <u>9</u> ft.	
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
Dominant Bank Vegetation (list): Tsuga canadensis, Betula alleghaniensis, Dryopteris intermedia.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, riffles, woody debris.			
Aquatic Organisms Observed (list): Amphibians.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is a perennial waterbody located within forest. The feature has a lot of large debris and downed logs in the channel.			



sird016p_NW (downstream)



sird016p_SE (upstream)



sird016p_SW (across)